

## **401 KAR 61:065. Existing nitric acid plants.**

RELATES TO: KRS Chapter 224

STATUTORY AUTHORITY: KRS 224.10-100

NECESSITY, FUNCTION, AND CONFORMITY: KRS 224.10-100 requires the Environmental and Public Protection Cabinet to prescribe administrative regulations for the prevention, abatement, and control of air pollution. This administrative regulation provides for the control of emissions from existing nitric acid plants.

Section 1. Applicability. The provisions of this administrative regulation shall apply to each affected facility which means each nitric acid production unit commenced before the classification date defined below.

Section 2. Definitions. As used in this administrative regulation, all terms not defined herein shall have the meaning given them in 401 KAR 50:010.

(1) "Nitric acid production unit" means any facility producing weak nitric acid by either the pressure or atmospheric pressure process.

(2) "Weak acid production unit" means acid which is thirty (30) to seventy (70) percent by weight in strength.

(3) "Classification date" means August 17, 1971.

Section 3. Standard for Nitrogen Oxides. On and after the date on which the performance test required to be conducted by 401 KAR 61:005, Section 2, is completed, no owner or operator subject to the provisions of this administrative regulation shall cause to be discharged into the atmosphere from any affected facility any gases which:

(1) Contain nitrogen oxides, expressed as nitrogen dioxide, in excess of two and nine-tenths (2.9) kg per metric ton of acid produced (five and eight-tenths (5.8) lb. per ton), the production being expressed as 100 percent nitric acid.

(2) Exhibit ten (10) percent opacity, or greater.

Section 4. Test Methods and Procedures. (1) The reference methods as defined in Appendix A of 40 CFR 60, filed by reference in 401 KAR 50:015, except as provided for in 401 KAR 50:045, shall be used to determine compliance with the standard prescribed in Section 3 of this administrative regulation as follows:

(a) Reference Method 7 for the concentration of nitrogen oxides;

(b) Reference Method 1 for sample and velocity traverses;

(c) Reference Method 2 for velocity and volumetric flow rate; and

(d) Reference Method 3 for gas analysis.

(2) The sampling point shall be the center of the stack or duct at a point no closer to the walls than one (1) meter (3.28 feet). Each run shall consist of at least four (4) grab samples taken at approximately fifteen (15) minute intervals. The arithmetic mean of the samples shall constitute the run value. A velocity traverse shall be performed once per run.

(3) Acid production rate, expressed in metric tons per hour of 100 percent nitric acid, shall be determined during each testing period by suitable methods and shall be confirmed by a material balance over the production system.

(4) For each run, nitrogen oxides, expressed in g/metric ton of 100 percent nitric acid, shall be determined by dividing the emission rate in g/hour by the acid production rate. The emission rate shall be determined by the equation:

$$\text{g/hr} = (\text{Qx})(\text{c})$$

Where:

$Q_x$  = volumetric flow rate of the effluent in dscm/hr, and

$c$  = nitrogen oxides concentration in g/dscm. (5 Ky.R. 485; eff. 6-6-1979; TAm eff. 8-9-2007.)